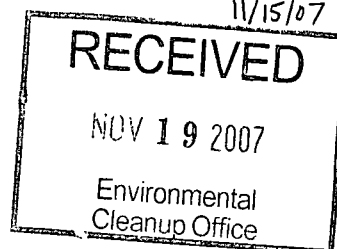


11/15/07

TRONOX

November 15, 2007

Mr. Bill Ryan
US EPA Region X
1200 Sixth Avenue – ECL-113
Seattle, WA 98101

Re: Review of the Second Five Year Review Report for the Kerr- McGee Chemical Corp. Soda Springs Superfund Site, Caribou County, Idaho, dated September 2007

Dear Mr. Ryan:

Thank you for providing Tronox the opportunity to examine the Second Five Year Review Report for the Kerr-McGee Chemical Corp. Soda Springs Superfund Site, Caribou County, Idaho, dated September 2007. Following our assessment of this document, we offer a number of comments intended only to clarify statements made in the 5-year review document. Our comments are intended to further the accuracy or interpretation of the findings of the report. Some of these corrections are offered for consistency or to amend misstatements in previous or historic documents that were available to the US Army Corps. of Engineers at the time of their review. Other general comments relate to statements regarding concepts or conclusions made from the data or site actions that we believe to be either unrelated or could potentially be interpreted as being inaccurate.

General Comments

Tronox has been working with the contract laboratory to provide new analytical methods for arsenic in order to reduce the reporting limit for the current October 2007 sampling round and for future ground water and surface water sample rounds. This action was taken immediately following our meeting with the US Army Corps. of Engineers in July 2007. The new reporting limit for arsenic is expected to be half the 10 ug/l MCL and should be satisfactory for identifying whether performance standards are being met for arsenic in the ground water at the point of compliance.

A number of statements are made in the 5-year review document regarding the reduction of arsenic concentration in well KM-8 in response to the remedial action that included capping of the calcine in 2001. There is a substantial distance between the cap and well KM-8, with little arsenic detected in the ground water in the wells between these two sites. Therefore, we believe that these events are likely unrelated. Concentrations in ground water range from less than detection in on-site wells to 90 ug/l in well KM-8 near the reclaimed S-X pond. Recent distribution of arsenic in on-site wells shows that arsenic is also detected in wells around the reclaimed scrubber pond, directly adjacent to the cap at 10 ug/l or greater in concentration. Arsenic concentration changes appear unaffected by the capping of the calcine at these closest locations.

Tronox LLC

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The calcine cap appears to be working as designed. As the result of the impermeable 40-mil HDPE cover liner placed over this 26.5 acre facility, a substantial volume of runoff is generated in the spring to areas adjacent to the cap through the drainage net. This runoff has occurred since the spring of 2002. A number of grading improvements were made around the cap since that time to handle the snowmelt and to reduce the amount of snow to the cap and surrounding areas. The snow fence was added as an additional improvement in 2006 in order to reduce the snow drift into the 10-acre pond located immediately east of the cap.

Specific Comments

1. Page vi, paragraph 1. *"The Kerr-McGee Chemical Corporation (KMCC) Superfund Site in Soda Springs, Idaho consists of a single operable unit. KMCC (now Tronox, Inc.), operated a vanadium production facility beginning in March 1964. "*

The RI report states that Kermac Nuclear Fuels Corp. commenced full production in March 1964. However, vanadium production was initiated in 1963.

2. Page vi, paragraph 2. *"The waste by-products of vanadium production (calcine, roaster, and solvent extraction (S-X) solids) were transported to three different ponds using water. "*

Roaster reject was mechanically removed from the roasters. The roaster reject solids were not transported to ponds and no water was used to transport the material. Reject was stacked on the ground north of the limestone pile near the northwest corner of calcine cap. Roaster reject that was not recycled back into the vanadium process was interred beneath the cap.

3. Page vi, paragraph 7. *"Groundwater monitoring data reveal, after initially decreasing, trends for a number of COCs have been relatively flat since the late 1990s"*

The Remedial actions at the site specified in the ROD were initiated in the late 1990s, although KM discontinued use of some of these ponds prior to this time. We believe that the concentrations for most COCs began to show an immediate reduction in concentration. A reduction in the concentration change over time is noted at a few of the on-site wells between 2000 and 2004 for molybdenum and vanadium. These wells include those located nearest the former unlined pond sites.

4. Page 2, Table 1. *"Constructed south infiltration basins & snow fencing November 2004"*

The infiltration basin was constructed in November 2005 and the snow fence installed to protect the 10-acre pond only, was installed in November 2006.

5. Page 3, paragraph 1. *"The KMCC site is located about three miles north of Soda Springs, Idaho, on State Route 34. The site has expanded from its original 50 acres to about 547 acres in size. The area surrounding the site is agricultural, primarily grain crops."*

Although the land ownership has expanded, the industrial site remains approximately 80 acres in size. The industrial site for the vanadium plant is surrounded by wells determined for Point of Compliance (POC) monitoring. The current aerial extent of the industrial site has actually been reduced since the time of vanadium production. The surrounding land use, including the use of the property acquired by Tronox from land ownership expansion is dry land farming or in fallow.

6. Page 3, paragraph 2. *"Kerr-McGee Chemical Corporation operated a vanadium production facility in Caribou County beginning in March 1964."*

See comment 1.

7. Page 3, paragraph 3. *"The vanadium plant was closed in January 1999 because of economic considerations and fully dismantled by June 2002."*

Change to May 2002, consistent with Table 1, page 3.

8. Page 3, paragraph 4. *"The fertilizer plant, constructed in 1997 to reuse/recycle calcine tailings and roaster rejects, was shut down in the second quarter of 2002 and subsequently dismantled."*

The fertilizer plant shut down in the second quarter 2000, although you are correct in Table 1 that the plant was dismantled by June 2003. However, the fertilizer plant did not recycle roaster reject material into fertilizer. Roaster reject that was not reused (recycled) in the vanadium plant was placed beneath the cap.

9. Page 4, paragraph 2. *"At the KMCC site the hydraulic conductivities are all relatively similar."*

Testing of the wells indicate that hydraulic conductivity ranges widely across the site, from about 5 feet per day (ft/day) in well KM-17 to 340 ft/day in well KM-6.

10. Page 4, paragraph 3. *"Groundwater monitoring wells are screened at two levels"*

Three aquifer zones or "levels" are monitored at the site, including the deepest portion of the basalt aquifer (KM-19) 194 to 214 feet bgs at the most hydraulically downgradient position on the industrial site. This is within the deepest section of the basalt sequence, immediately above the Salt Lake Formation. Well KM-19 does not exceed RBC for any of the COC.

11. Page 6, paragraph 3 *"Construction and operation of a phosphoric acid plant to consume scrubber water and calcine tailings to produce phosphoric acid, ammoniated phosphate, and gypsum fertilizers as marketable products"*

The plant constructed at the site did not produce phosphoric acid. Scrubber water was also not consumed in the fertilizer plant. Wet scrubbers were replaced at the vanadium plant with dry baghouses in 1997.

12. Page 7, last paragraph. *"Fencing and seeding were the last actions and were completed in August 2000."*

Fencing and seeding of the calcine cap were completed in August 2001.

13. Page 8, paragraph 2. *"In 2004, another infiltration pond was completed on the south side of the cap. After observing snow drifts piling on the cap and increasing the amount of percolation through the cap, a snow fence was erected along the south side of the facility, in line with the cap."*

The second infiltration basin on the south side of the cap was constructed in November 2005. Snow drifts are not observed to accumulate on the cap, rather, snow is noted to be deposited on the north side of the cap in the area between the cap and reclaimed 5-acre ponds. No percolation is noted to occur through the cap because the liner specifications indicate a hydraulic conductivity of $4e^{-13}$ cm/sec. HELP modeling indicates that the infiltration through the cap is about 9 ft³ per year on average.

The snow fence installation is unrelated to the calcine cap. The snow fence was constructed in November 2006 to reduce the amount of snow drift into the 10-acre pond. The fence has had no observed impact to the cap.

14. Page 8, paragraph 4. *"There is no current estimate of when concentrations of COC will achieve the performance standards."*

A summary of projected dates when COC concentrations will achieve performance standards is contained in Table 6-1 of the annual comprehensive ground water report. Five of the monitor wells located adjacent to former ponds cannot be projected, while other site wells indicate that performance standards will be met.

15. Page 9, paragraph 2. *"There is one on-site monitoring well that currently has arsenic concentrations greater than 10 µg/L: 90 µg/L at KM-8."*

Wells KM-2 and KM-3 located near the former scrubber pond also exceed the 10 ug/l MCL on occasion.

16. Page 10, paragraph 5 *"During the First Five-Year Review period, groundwater concentration of several of the COCs decreased significantly, reflecting the continued downward trend since the implementation of the remedial activities in 1997. However, no groundwater or surface water cleanup goals had been met. "*

Ground and surface water data indicate that during the time of the first 5-year review in 2002, ground water clean-up goals had been met for arsenic in all but one well (KM-8), clean-up goals had been met for tributyl phosphate in all but one well (KM-8), clean-up goals had been met for manganese in all but two wells (KM-3 and KM-8), and clean-up goals had been met for TPH in all wells except one well (KM-8).

17. Page 10, paragraph 6. *"Concentrations of arsenic at a single well near the former S-X pond remain well above the MCL of 10 µg/L though they have decreased somewhat since implementation of the remedy (calcine cap) in 2001. "*

There does not appear to be a clear ground water trend for arsenic in well KM-8. The drop in arsenic concentration in well KM-8 following placement of the cap is likely unrelated, as concentrations are recently rising. The distance between the calcine cap and well KM-8 is about 1800 feet and arsenic does not or has not occurred at significant levels in ground water between the cap and well KM-8.

18. Page 11, last paragraph. *" While the various components of the remedy have been constructed as designed, groundwater monitoring data reveal, after initially decreasing, trends for a number of COCs have been relatively flat since the late 1990s "*

With the exception of capping the calcine in 2001, the site remedy was completed in late 1990s, a point from which concentrations began to decrease. Most site wells indicate continued decreasing trends for COCs and other constituents through 2007. Some flattening of the data is noted in a few wells near former ponds for the period between 2001 and 2004 for vanadium.

19. Page 12, paragraph 1. *"Capping system performance was improved by erecting a snow fence to minimize snow drifts, thereby reducing the amount of water to manage on the site. "*

The cap is performing as designed. However, the capping system performance is probably unaffected by the snow fence, based on the current design placement. The snow fence is successful in reducing the amount of snow drift that is deposited into the 10-acre pond located to the east of the calcine cap.

20. Page 12, paragraph 1. *"Only a small amount of leachate continues to be produced by the scrubber/S-X pond landfill and is pumped annually"*

The landfill is not pumped annually, but approximately every other month when accessible. It is pumped as required to maintain a head level in the sump of less than 30 cm, as per RCRA statutes when the waste facility is not directly monitored by ground water wells in both up- and downgradient locations.

21. Page 12, last paragraph. *"There is one on-site monitoring well that currently has arsenic concentrations greater than 10 µg/L; 90 µg/L at KM-8. The long-term monitoring data (1991-2007) show no discernible trend for arsenic at this well. However, since installation of the calcine cap in 2001 there does appear to be a downward trend in arsenic concentrations"*

Wells KM-2 and KM-3 located near the former scrubber pond also exceed the 10 ug/l MCL for arsenic on occasion. There should be no relationship between capping of the calcine in 2001 and changes in the arsenic concentration in well KM-8 due to the substantial distance and minimal concentrations of arsenic between these locations (see comments 15 and 17).

If you have any questions about clarifications offered to the document as described above, please contact me at (208) 547-3331, extension 230.

Sincerely,
Tronox Inc.



Boyd Schvaneveldt
Site Manager

xc: John Hatmaker (Tronox Inc)
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J.S. Brown, P.G. Global Environmental Technologies, LLC